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Phone (800) 451-8346

Manufacturer Memorandum Sheet

Date 29-Jul-97

TO: MSDS - Requester
FROM: KS - 3E Company
RE: The MSDS you have requested

Manufacturer: Pool Master Inc.

Product Name: 4 In 1 Test Kit

Mfg Contact Name: Brenda

Mfg Phone #: (916) 567-9800

Per the manufacturer the MSDS(s) listed below cover the above product.

Poolmaster Solution #1/Poolmaster OTO
Poolmaster Phenol Red/Poolmaster Solution #2
Poolmaster Solution #3/Acid Demand & Alkalinity Test Solution
Poolmaster Solution #4 Chlorine Neutralizer
Poolmaster Solution #5 Total Alkalinity Test

POOLMASTER, INC.**MAILING ADDRESS**

P.O. BOX 340308, SACRAMENTO, CA 95834-0308

PHONE & FAX NUMBERS: **New Office & Warehouse:**
 Local (916) 567-9800 770 W. DEL PASO ROAD
 Toll Free: (800) 854-1776 SACRAMENTO,
 CA 95834-1117
 FAX: 916-567-9880

MATERIAL SAFETY DATA SHEET

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SECTION I**MANUFACTURER'S NAME**

POOLMASTER, INC.

EMERGENCY TELEPHONE NO.

916-567-9800

TRADE NAME AND SYNONYMS

Poolmaster Solution #1

Poolmaster OT0 (Orthotolidne)

CHEMICAL NAME AND SYNONYMS

O-Tolidine Dihydrochloride (3, 3'-Dimethyl-(1,1'-Biphenyl)-4,4'-diamine Dihydrochloride)

CHEMICAL FAMILY

Organic indicator

FORMULA $(-C_6H_3-4-NH_2-3-CH_3)_2 \cdot 2HCl$ **SECTION II - HAZARDOUS INGREDIENTS**

COMPONENT	%	HAZARD DATA
O-Tolidine Dihydrochloride	<0.2	DANGER-Suspected carcinogen
Hydrochloric Acid		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	Specific Gravity (H ₂ O=1)	1.0
VAPOR PRESSURE (mm Hg.)	NA		
VAPOR DENSITY (AIR=1)	NA		
SOLUBILITY IN WATER	Complete		

APPEARANCE AND ODOR

Clear, odorless, water-like solution.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NA - Aqueous solution	FLAMMABLE LIMITS	NA
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EXTINGUISHING MEDIA	NA
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SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Not established
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TOXICITY	Suspected carcinogen. Toxicity levels not established.
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SECTION V - HEALTH HAZARD DATA (cont.)**EFFECTS OF OVER EXPOSURE**

GENERAL - Suspected carcinogen. **INHALATION:** May be harmful if inhaled.

EYES: Solution may cause eye burns. **SKIN:** Harmful if absorbed through skin.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: Give water. Do not induce vomiting. Seek medical attention.

EYES: Immediately flush with plenty of water and get medical attention.

SKIN: Immediately flush with plenty of water. Remove contaminated clothing.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Strong oxidizers
	STABLE	XX	

INCOMPATIBILITY

Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

N/A

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID N/A
	WILL NOT OCCUR	XX	

NFPA RATINGS (Scale 0-4): **HEALTH**=3 **FIRE**=0 **REACTIVITY**=0

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled.

Wearing suitable protective clothing, collect spilled material in sealed container.
Wash spill area with soap and water.

WASTE DISPOSAL METHOD

Wearing suitable protective clothing, collect spill with absorbent, flammable material and incinerate. State and local laws take precedence.

SECTION VIII - SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION**

N/A

VENTILATION	LOCAL EXHAUST If necessary	SPECIAL
	MECHANICAL	OTHER

PROTECTIVE GLOVES YES	EYE PROTECTION Safety glasses
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OTHER PROTECTIVE EQUIPMENT As necessary to prevent skin contact.

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Keep bottles tightly sealed when not in use. Do not store in direct sunlight.
Protect from freezing and extreme heat.

OTHER PRECAUTIONS

None

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SECTION I

MANUFACTURER'S NAME POOLMASTER, INC.	EMERGENCY TELEPHONE NO. 916-567-9800
TRADE NAME AND SYNONYMS POOLMASTER PHENOL RED POOLMASTER SOLUTION #2	

CHEMICAL NAME AND SYNONYMS

Phenol Red (Phenolsulphonthalein)

CHEMICAL FAMILY

Organic pH Indicator

FORMULA $C_6H_4C(C_6H_4-4-OH):C_6H_4-4:O-SO_4$ **SECTION II - HAZARDOUS INGREDIENTS**

COMPONENT	%	HAZARD DATA
Phenolsulphonthalein		See Health Hazard (Toxicity) data below.

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	Specific Gravity (H ₂ O=1)	-1.0
VAPOR PRESSURE (mm Hg.)	17		
VAPOR DENSITY (AIR=1)	0.6		
SOLUBILITY IN WATER	Complete		

APPEARANCE AND ODOR

Red, water-like solution.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NA-Aqueous solution.	FLAMMABLE LIMITS	NA
EXTINGUISHING MEDIA Use extinguishing media for primary cause of fire.			
SPECIAL FIRE FIGHTING PROCEDURES			

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

NA

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
TOXICITY Mutagenic with Ames Test with and without activation.

SECTION V - HEALTH HAZARD DATA (cont.)**EFFECTS OF OVER EXPOSURE**

Not established other than mutagenic activity.

EMERGENCY AND FIRST AID PROCEDURES

Ingestion: Give plenty of water to dilute. Consult a physician immediately. Eyes: Flush with water for 15 minutes. Get medical attention if symptoms persist. Skin: Wash with soap and water.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	NA
	STABLE	X		

INCOMPATIBILITY

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	None
	WILL NOT OCCUR	X		

NFPA RATINGS (Scale 0-4): HEALTH=0 FIRE=0 REACTIVITY=0

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Absorb material with suitable absorbent.

WASTE DISPOSAL METHOD

Dispose of contaminated material in accordance with current laws and ordinances.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Not required

VENTILATION	LOCAL EXHAUST	Not required	SPECIAL	NA
	MECHANICAL	Not required	OTHER	NA

PROTECTIVE GLOVES Not required EYE PROTECTION Not required

OTHER PROTECTIVE EQUIPMENT
None

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Ensure that bottle cap is tightly sealed after using. Protect from extreme heat and freezing.

OTHER PRECAUTIONS

None

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SECTION I**MANUFACTURER'S NAME**

POOLMASTER INC.

EMERGENCY TELEPHONE NO.

916-567-9800

TRADE NAME AND SYNONYMS

POOLMASTER SOLUTION #3
ACID DEMAND AND ALKALINITY TEST SOLUTION

CHEMICAL NAME AND SYNONYMS

HYDROCHLORIC ACID SOLUTION

CHEMICAL FAMILY

MIXTURE

FORMULA

N/A

SECTION II - HAZARDOUS INGREDIENTS

COMPONENT	%	HAZARD DATA
HYDROCHLORIC ACID	0.1	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H ₂ O=1)	1.01
VAPOR PRESSURE (mm Hg.)	20° C=16		
VAPOR DENSITY (AIR=1)	NA		
SOLUBILITY IN WATER COMPLETE			

APPEARANCE AND ODOR

CLEAR, ODORLESS AND INSOLUBLE

SECTION IV - FIRE AND EXPLOSION HAZARD DATA**FLASH POINT (Method used)****FLAMMABLE LIMITS****EXTINGUISHING MEDIA**

NOT APPLICABLE

SPECIAL FIRE FIGHTING PROCEDURES

N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS

N/A

SECTION V - HEALTH HAZARD DATA**THRESHOLD LIMIT VALUE****TOXICITY**

SECTION V - HEALTH HAZARD DATA (cont.)**EFFECTS OF OVER EXPOSURE**

ROUTES OF ENTRY, SIGNS AND SYMPTOMS AND MEDICAL CONDITIONS
AGGRAVATED BY EXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

EYE IRRITANT. FLUSH WITH WATER FOR 15 MINUTES. CONTACT A PHYSICIAN
IF IRRITATION OCCURS.
FOR INGESTION, GIVE PLENTY OF WATER AND CONTACT A PHYSICIAN.
SKIN CONTACT FLUSH WITH WATER

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	HEATING WILL RESULT IN LIBERATION OF TOXIC HYDROGEN CHLORIDE FUMES

INCOMPATIBILITY

N/A

HAZARDOUS DECOMPOSITION PRODUCTS

HEATING WILL LIBERATE TOXIC HYDROGEN CHLORIDE FUMES

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

MOP UP OR FLUSH TO SEWER WITH WATER

WASTE DISPOSAL METHOD

FLUSH TO SEWER - FOLLOW ALL FEDERAL, STATE AND LOCAL WASTE
DISPOSAL REGULATION.

SECTION VIII - SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION**

NO

VENTILATION NO	LOCAL EXHAUST	SPECIAL
	MECHANICAL	OTHER

PROTECTIVE GLOVES

NO

EYE PROTECTION

YES

OTHER PROTECTIVE EQUIPMENT

SAFETY GLASSES

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

KEEP OUT OF REACH OF CHILDREN

OTHER PRECAUTIONS

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SECTION I**MANUFACTURER'S NAME**

POOLMASTER, INC.

EMERGENCY TELEPHONE NO.

916-567-9800

TRADE NAME AND SYNONYMS

Poolmaster solution #4 chlorine neutralizer

CHEMICAL NAME AND SYNONYMS

Sodium Thiosulfate solution

CHEMICAL FAMILY

Inorganic Salt Solution

FORMULANa₂S₂O₃**SECTION II - HAZARDOUS INGREDIENTS**

COMPONENT	%	HAZARD DATA
Sodium Thiosulfate	< 1.0	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	Specific Gravity (H ₂ O=1)	1.0
VAPOR PRESSURE (mm Hg.)	17		
VAPOR DENSITY (AIR=1)	0.6		
SOLUBILITY IN WATER	Complete		

APPEARANCE AND ODOR

Colorless, odorless, water-like solution.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NA-Aqueous Solution	FLAMMABLE LIMITS	NA
EXTINGUISHING MEDIA	Water		

SPECIAL FIRE FIGHTING PROCEDURES

None

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Not established for mixture
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TOXICITY

300 mg/kg per 7 days resulted in blood effects.

SECTION V - HEALTH HAZARD DATA (cont.)**EFFECTS OF OVER EXPOSURE**

Large doses internally can cause cathartic effects in humans.

EMERGENCY AND FIRST AID PROCEDURES

Ingestion: Dilute by drinking water; induce vomiting and seek medical attention immediately. Eyes and Skin: Flush with water. Seek medical attention if symptoms persist.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	Avoid evaporation to dryness.
	STABLE	X		

INCOMPATIBILITY

None

HAZARDOUS DECOMPOSITION PRODUCTS

If evaporated to dryness and decomposition, toxic hydrogen sulfides and sulfur oxides can evolve.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Flush to sewer.

WASTE DISPOSAL METHOD

Flush to sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION**

Not required

VENTILATION	LOCAL EXHAUST	If misting occurs	SPECIAL	None
	MECHANICAL	None	OTHER	None

PROTECTIVE GLOVES

Not required

EYE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

None

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Avoid unnecessary skin contact and guard against evaporation to dryness. Protect against freezing or extreme heat.

OTHER PRECAUTIONS

None

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SECTION I

MANUFACTURER'S NAME

POOLMASTER, INC.

EMERGENCY TELEPHONE NO.

916-567-9800

TRADE NAME AND SYNONYMS

Poolmaster Solution#5 Total Alkalinity test

CHEMICAL NAME AND SYNONYMS

Bromophenol Blue

CHEMICAL FAMILY

Organic Indicator

FORMULA

$C_6H_4SO_2OC(C_6H_2-3,5-Br_2-OH)_2$

SECTION II - HAZARDOUS INGREDIENTS

COMPONENT	%	HAZARD DATA
Bromophenol Blue	0.04	

SECTION III - PHYSICAL DATA

BOILING POINT (*F.)	212	-1.0
VAPOR PRESSURE (mm Hg.)	17	
VAPOR DENSITY (AIR=1)	0.6	
SOLUBILITY IN WATER	Complete	

APPEARANCE AND ODOR

Blue, liquid (water-like) solution

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NA-Aqueous Solution	FLAMMABLE LIMITS	NA
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EXTINGUISHING MEDIA	Water
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SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

NA

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Not established
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TOXICITY	Not established
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SECTION V - HEALTH HAZARD DATA (cont.)**EFFECTS OF OVER EXPOSURE**

Not established

EMERGENCY AND FIRST AID PROCEDURES

Ingestion: Drink large volumes of water; induce vomiting; seek medical attention.
Eyes and Skin: Flush with water. Seek medical attention if symptoms persist.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	None
	STABLE	X		

INCOMPATIBILITY

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	None
	WILL NOT OCCUR	X		

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Absorb spills with appropriate absorbent material.

WASTE DISPOSAL METHOD

Dispose of contaminated absorbent in accordance with current laws and ordinances.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION			Not applicable		
VENTILATION	LOCAL EXHAUST	Not required		SPECIAL	
	MECHANICAL	Not required		OTHER	
PROTECTIVE GLOVES			Not required		EYE PROTECTION
					Safety glasses
OTHER PROTECTIVE EQUIPMENT					
None					

SECTION IX - SPECIAL PRECAUTIONS**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Avoid contact with skin, clothing and other materials or chemicals. Protect from freezing or extreme heat.

OTHER PRECAUTIONS

None

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